

**CLAIMS**

1           1.       A mechanism comprising:

2               a printed circuit board having a first surface, a second surface and a first edge, said printed circuit  
3       board including at least one female member on said first edge to receive a corresponding male member;  
4       and

5               an extension board having a male member extending from a first edge to couple to said at least  
one female member so as to couple said extension board to said printed circuit board.

2.       The mechanism of claim 1, wherein said at least one female member comprises an  
opening on said first edge of said printed circuit board between said first surface and said second surface.

3.       The mechanism of claim 1, wherein said at least one male member couples with said at  
least one female member such that said at least one male member does not extend above said first  
surface of said printed circuit board and said at least one male member does not extend below said  
second surface of said printed circuit board.

4.       The mechanism of claim 1, wherein said extension board further includes a guide member  
that extends from said first edge and supports said second surface of said printed circuit board when said  
extension board is coupled to said printed circuit board.

5.       The mechanism of claim 1, wherein said printed circuit board is manufactured separately

2 from said extension board.

1 6. A mechanism for assembling a printed circuit board having a top surface and a bottom  
2 surface, said mechanism comprising an extension board to attach to a first edge of said printed circuit  
3 board and means for temporarily attaching said printed circuit board to said extension board by inserting a  
4 male member located on one of said extension board and said printed circuit board into a female member  
located on the other one of said extension board and said printed circuit board.

7. The mechanism of claim 6, wherein said female member is provided on said printed circuit  
board and comprises an opening on said first edge of said printed circuit board between said top surface  
and said bottom surface.

8. The mechanism of claim 6, wherein said male member is provided on said extension  
board and extends from said extension board to couple with said female member such that said male  
member does not extend above said top surface of said printed circuit board and said male member does  
not extend below said bottom surface of said printed circuit board.

9. The mechanism of claim 6, wherein said mechanism further includes a guide member that  
extends from said extension board and supports said bottom surface of said printed circuit board when  
said extension board is coupled to said printed circuit board.

10. A method of assembling a printed circuit board comprising:

attaching a first printed circuit board to an extension board by inserting a first member located on one of said extension board and said first printed circuit board into a second member located on the other one of said extension board and said first printed circuit board so as to avoid overhanging components on said first printed circuit board; and

removing said first member from said second member such that said first printed circuit board becomes disconnected from said extension board.

11. The method of claim 10, wherein after removing said first member from said second member, said method further comprises attaching a second printed circuit board to said extension board by inserting said first member located on said extension board into a third member located on said second printed circuit board so as to avoid overhanging components on said second printed circuit board.

12. The method of claim 11, further comprising removing said first member from said third member located on said second printed circuit board such that said second printed circuit board becomes disconnected from said extension board.

13. The method of claim 10, further comprising attaching a second printed circuit board to said extension board by inserting a third member located on said second printed circuit board into said second member located on said extension board so as to avoid overhanging components on said second printed circuit board.

1           14.     The method of claim 10, wherein said first member comprises a key and said second  
2 member comprises a keyhole.

1           15.     The method of claim 10, wherein said first member is inserted into said second  
2 member such that said second member does not extend above a top surface of said first printed circuit  
3 board and said first member does not extend below a bottom surface of said printed circuit board.

1           16.     The method of claim 10, further comprising assembling components on said first  
2 printed circuit board that extend from said printed circuit board over said extension board.

1           17.     The method of claim 10, further comprising manufacturing said first printed circuit  
2 board and separately manufacturing said extension board.

1           18.     A method comprising:  
2           receiving a printed circuit board having at least one keyhole;  
3           mounting an extension having at least one key to said printed circuit board by inserting said at  
4 least one key into said at least one keyhole;  
5           mounting components on said printed circuit board; and  
6           disconnecting said extension from said printed circuit board.

1           19.     The method of claim 18, further comprising mounting said extension to another printed  
2 circuit board by inserting said at least one key into a keyhole on said another printed circuit board.

1           20.     The method of claim 18, further comprising routing said at least one keyhole.

1           21.     The method of claim 18, wherein said key is inserted into said keyhole such that said  
2 key member does not extend above a top surface of said printed circuit board and said key does not  
3 extend below a bottom surface of said printed circuit board.

1           22.     The method of claim 18, further comprising manufacturing said printed circuit board  
2 and separately manufacturing said extension.

1           23.     A mechanism for assembling a printed circuit board having a top surface and a bottom  
2 surface, said mechanism comprising:

3                 an extension board to attach to a first edge of said printed circuit board, said extension board  
4 having a top surface and a bottom surface; and

5                 means for attaching said printed circuit board to said extension board by inserting a key into a  
6 keyhole, for maintaining said top surface of said extension board relatively coplanar with said top  
7 surface of said printed circuit board, and for maintaining said bottom surface of said extension board  
8 relatively coplanar with said bottom surface of said printed circuit board.

1           24.     The mechanism of claim 23, wherein said key extends from said extension board to  
2 couple with said keyhole such that said key does not extend above said top surface of said printed  
3 circuit board and said key does not extend below said bottom surface of said printed circuit board.

1           25.     The mechanism of claim 23, wherein said mechanism further includes a guide member

2 that extends from said extension board and supports said bottom surface of said printed circuit board  
3 when said extension board is attached to said printed circuit board.

1 26. A mechanism for assembling a printed circuit board having a top surface and a bottom  
2 surface, said mechanism comprising an extension board to attach to a first edge of said printed circuit  
3 board, said extension board having a top surface and a bottom surface and including a key to attach to  
4 a keyhole on said printed circuit board, said key to maintain said top surface of said extension board  
5 relatively coplanar with said top surface of said printed circuit board and to maintain said bottom  
6 surface of said extension board relatively coplanar with said bottom surface of said printed circuit  
7 board.

1 27. The mechanism of claim 26, wherein said key extends from said extension board to  
2 couple with said keyhole such that said key does not extend above said top surface of said printed  
3 circuit board and said key does not extend below said bottom surface of said printed circuit board.

1 28. The mechanism of claim 26, wherein said mechanism further includes a guide member  
2 that extends from said extension board and supports said bottom surface of said printed circuit board  
3 when said extension board is attached to said printed circuit board.